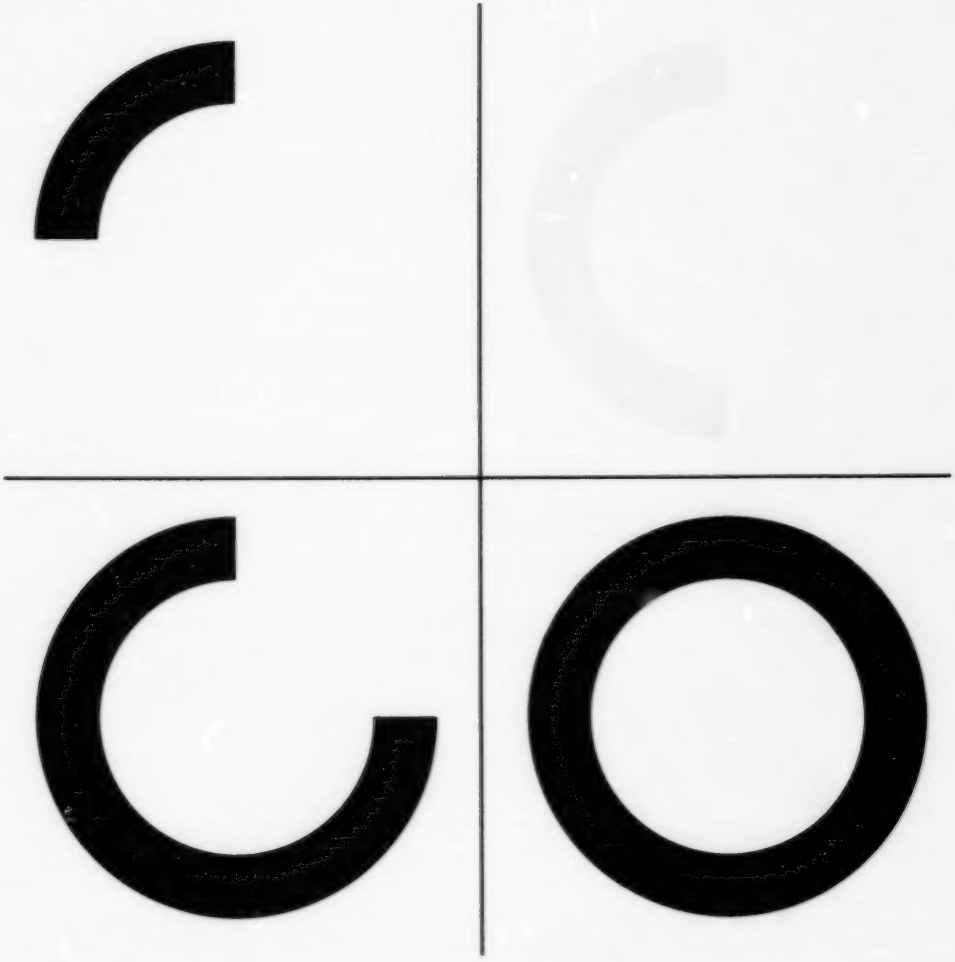
1986-1987

The Ontario Mental Health Foundation



Chairman's Report

"During 1986-87 the Ontario Mental Health Foundation has continued with its major task of funding research investigations which have a bearing upon mental health and mental disorders. The Foundation has funded a programme of research grants, for a total cost of $1,996,147. and a programme of individual awards for a total cost of $949,465. Details of these two programmes will be found elsewhere in this report.

In addition to its own programmes of grants and individual awards the Foundation ran a research competition on behalf of the Ministry of Community and Social Services. The Foundation was pleased to undertake this additional task to help realise the Ministry's objectives: to promote research in three areas — developmental handicap; the elderly; and physical disability. The Foundation convened a committee whose members had scientific expertise bearing on the three target areas; the members reported to the Foundation that the bulk of the applications which came forward in this competition were of high quality. The number of applications reviewed in this new competition was 82.

In addition, during the past year, the members of the Foundation have continued to carry out an examination of the Foundation itself. Attention has been directed particularly to the Foundation's overall strategy and the nature of its operation. One major result of these deliberations has been a decision that the Foundation should become pro-active in seeking appropriate scientific targets while not abandoning the peer-review system which has worked well in the past to promote high quality research in this province.

The Foundation now looks forward towards the creation of a permanent scientific position whose incumbent will lead the Ontario Mental Health Foundation, and to a restructuring of the committees of the Foundation so that more attention is paid to determining policies and procedures to enable the Foundation to act in a pro-active way.

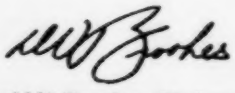
In carrying out this self-examination the Foundation has been guided by the report of an external evaluation committee headed by Dr. Herbert Weiner (University of California School of Medicine) whose report came before the Foundation in June 1986. In addition the Foundation has carried out extensive consultations with members of the scientific community in Ontario.

This work of self-examination development will continue in the next fiscal year as action plans are completed and the implementation of the decisions taken in this year begins.

The aim will be to achieve actively a better understanding of what is needed in mental health research and to fill those needs where it appears that the Foundation can make a unique contribution. During the year we described the mission of the Foundation as follows:

> "The mission of the Ontario Mental Health Foundation is to contribute to the body of knowledge about mental disorders, their causes, their treatments and their cures. In this endeavour we believe an essential element is scientific excellence through the support scientists, research and education. Fundamental to this is the continuity of support of the individual scientist. The Foundation's aim is to promote and enable the entry and continued work of trained persons in the field of mental health research."

Again I wish to thank all the members of the Foundation and staff and the researchers and scholars who have made so many significant contributions to the work of the Foundation. I am particularly grateful to those who have helped us to look at ourselves, our successes, and our shortcomings to improve the vision of what the Ontario Mental Health wants to do and to be in the future.



Donald V. Brookes, Chairman

91-06611/

The Ontario Mental Health Foundation

Established by Special Act of Legislature of the Province of Ontario, 1960-61.

Members as at March 31, 1987

Donald Brookes, B.Comm.
Chairman, Don Mills

Peter Lush, CPM
Vice-Chairman, Burlington

Pierrette Beaudoin,
L'Orignal

Charles Birkett, M.D.
Kettleby

Rita Chrolavicius, LL.B.
Toronto

Peter Ferreira, B.A.
Mississauga

Sidney Freedman, LL.B.
Toronto

John Hughes
Toronto

Russell Jacobson, B.S.B.A.
Willowdale

Marlene Longdon, M.Sc.N.
Burlington

Iris Owen, R.N.
Toronto

David Quibell
Markham

Douglas Shields, C.A.
Richmond Hill

Wayne Squibb, B.A.
Toronto

Donald Webster, B.Sc.
Toronto

Peter Wendling, LL.B.
Islington

Vivian Wood, B.Sc.N., M.Ed.
London

Donald Zarfas, M.D.
London

Personnel:

Dugal Campbell, Ph.D.
Scientific Consultant

Margaret Clark,
Executive Director

Louise Brown

Anita Macatangay

Jessie Paterson

Audrey Stefanovich

Scientific Report

During 1986-87 work continued on two major tasks which had been begun in the previous year; in addition the Foundation set up a new peer review committee as part of the arrangements to manage a grant competition for lottery funds available to the Ministry of Community and Social Services.

1. During 1985-86 the Foundation set up a Task Force on Epidemiology. This Task Force met a number of times and set itself the task of specifying a set of epidemiological information which could form a basis for developing useful statistics about mental health and mental illness in Ontario. The task force, chaired by Dr. D.R. Offord, completed the work of defining a minimum data set. Such information could be collected for all individuals who use psychiatric facilities in Ontario and formed into a Provincial data-base. The recommendations developed by the Task Force were circulated at the end of the year to Provincial Psychiatric Hospitals, psychiatric units in general hospitals, and to a large number of other institutions and individuals whose criticisms and comments could guide the Foundation in forming a definitive set of recommendations. The aim was to define the data which could usefully be collected for epidemiological and administrative purposes in all psychiatric units in the Province and to sketch out how data-systems in different institutions could be linked to form a Provincial data-base.

The response to the draft document was gratifying. 38 responses were received from institutions; the number of individuals who played a part in preparing these responses was 67.

Two issues raised by many of the respondents which deserve particular notice: Data collection within an institution, and the further prospect of a data system that envisages sharing data between institutions both raise the issue of confidentiality; this issue is being addressed by the Task Force in its final recommendations. A second point made by almost all respondents was that the Foundation has acted in a timely way; the advent of computers, and the possibility of linking computers, has brought to the attention of many institutions the possibility of collecting data in a more systematic way and exchanging data in a way which will be useful to both administration and research.

2. During the year a substantial effort was made by the Foundation's advisors to assist the members of the Task Force which is preparing for the Minister of Health a report on Mental Health Research Priorities. A method which had been proposed for establishing mental health priorities turned out to be practicable; it involved making an inventory of all the mental health research being conducted in the Province and then classifying each research project in terms of a number of defined categories, such as, basic or applied research.

The inventory and classification was carried out in part by scientists associated with the Foundation. The report has since been completed and will shortly be submitted to the Minister of Health by the Chairman, Dr. Ron Schlegel of the University of Waterloo.

The Provincial work has suggested that a similar national inventory be made; the Canadian Association of Professors of Psychiatry has proposed to the Foundation that, because the Foundation now has the expertise to manage such a task, it undertake to carry it out. The Foundation has agreed to attempt this work.

3. During the Summer and Fall the Foundation prepared to carry out a peer review competition of grant projects to be funded by an award of lottery money made to the Ministry of Community and Social Services. This lottery competition is devoted to scientific work directed particularly to specific objectives: developmental handicaps, the physically handicapped and problems of the elderly. The particular objectives and aims of the Ministry of Community and Social Services were taken into account in forming a review committee of experts whose work lay in the relevant fields. Professor Michael Gent (McMaster University) was the chairman of the committee which met in the Fall and during the Winter to discharge its responsibilities. During these meetings 82 applications were reviewed.

This committee marks a new departure for the Foundation; previously scientific reviews

carried out for the Ministry of Community and Social Services were managed by a sub-committee of the Foundation's Research Committee. The change was made necessary by the special objectives adopted by the Ministry of Community and Social Services for this competition; however the peer review methods which the Foundation has developed for its regular competitions proved effective in dealing fairly with many new applicants whose projects lay in applied studies. The members of the review committee concluded that the quality of the applications reviewed was good and the formation of a special committee was justified.

4. The Foundation organised two workshops with the title "How to Prepare a Quality Research Proposal" on June 2, 1986 and July 3, 1986. The aim of the workshops was to provide information about the peer-review system and to give elementary instruction in the preparation of grant applications. The audience (91 attended the first workshop and 90 attended the second) came from a variety of social agencies and research departments many of which had not in the past submitted grant applications. The workshops were planned with the lottery competition in mind and were scheduled to allow new applicants to attend well in advance of the competition deadline.

Foundation Programmes

As a statutory foundation, the OMHF receives most of its funds in the form of an annual grant from the Province of Ontario.

The Foundation offers 1) individual awards to those who wish to take up careers in mental health research, and 2) support for research projects undertaken by investigators who plan to do research in the field of mental health. Teaching in departments of psychiatry in the medical faculties of Ontario universities is supported by the Foundation, and there is also a limited programme of support for conferences and publications.

A complete listing of all research projects, major equipment grants, and individual awards funded by the Foundation in 1986-87 will be found on the following pages of the Report.

How to Apply for Grants

Copies of the Rules for Project Research, Individual Awards and application forms may be obtained from the research offices at universities in Ontario, or upon request from the Foundation.

The Ruth Schwartz Foundation

During 1986-87, a donation of $10,000 was received from the Ruth Schwartz Foundation. Research which will provide new knowledge about what contributes to emotional disturbances in children is of particular interest to the Schwartz Foundation.

A study being conducted by Dr. Betty Ann Levy — "Diagnosing and Remediating Processing Skills Related to Reading Failure" — bears on factors related to emotional disturbances.

Dr. Levy, a professor of psychology and a leading researcher at McMaster University in Hamilton, has observed that up to one-third of the children in her study sample have some form of reading problem. She notes that other researchers claim that an even greater proportion of adults become entrenched non-readers. Learning to read is an enormous cognitive test, says Dr. Levy. "Even the experts are puzzled by the process. It's a wonder so many children actually do read."

Her preliminary research suggests that mental-processing deficits may short-circuit reading acquisition at an early age. Children who fall behind in the first five or six years of their lives may never catch up.

During the first phase of her work in 1984 and 1985, Dr. Levy and her team identified a package of basic skills that seem to be present in good readers. But this discovery, based on work with children in Grades 3 through 6, has since raised even more questions. The way in which these basic skills combine to create good or poor reading habits is largely unpredictable.

While many people recognize that our present education system doesn't teach every child how to read, they can only respond by blaming teachers. Through a research project supported by the Ontario Mental Health Foundation and the Ruth Schwartz Foundation, Dr. Levy hopes to provide information that will help teachers to better

meet the needs of individual children.

The Foundation is very grateful to the Schwartz Foundation for its continuing support.

Research Scholarship for Studies in Alzheimer's Disease

Alzheimer's disease is a very specific and major disease whose cause must be determined before it can be treated and prevented. Recent dramatic advances in medical instrumentation and technology have generated further interest in the diagnosis, treatment, and prevention of Alzheimer's disease. In a number of centres in Canada, studies are now under way or in the planning stages on a large variety of possible risk factors and on biological abnormalities in the brains of those with Alzheimer's disease.

The Société Alzheimer Society, London Chapter, recognizing the need for more research to determine the cause, methods of control and cure of Alzheimer's Disease, established a Research Scholarship to provide an opportunity for a research investigator to focus his or her research in this particular area. In 1986-87 this Scholarship was awarded to Dr. Andrius Baskys at the Playfair Neurosciences Unit of the Toronto Western Hospital, Toronto. Dr. Baskys has developed an animal model for conducting his studies in Alzheimer's Disease. As animals grow older changes are seen in their activities of cells in the brain which resemble the changes seen in human brain cells; because older animals also show changes in their abilities to learn and to remember which resemble alterations in human abilities scientists turn to the study of older animals with the idea of making an "animal model" for disorders, such as Alzheimer's disease, which is marked by impairment of cognitive abilities. Because the neural mechanisms of learning and memory are not yet established scientists must put forth speculative hypotheses concerning the most promising aspects of brain activity to study. Dr. Baskys plans to examine portions of rat brains which resemble those portions of human brain known to be altered in Alzheimer's disease. In these portions he will examine the presence and absence of particular substances (neurotransmitters known to influence communications between brain cells) when the cells are repeatedly stimulated, as would happen during learning. By comparing tissues taken from older and younger animals Dr. Baskys hopes to establish an animal model of the brain changes underlying Alzheimer's disease.

The Velleman Foundation Award

The Velleman Foundation was incorporated in 1974 in honour of Leonard and Leonora Velleman. The Velleman's dedicated themselves to the care and treatment of severely mentally retarded infants and in 1951 established the Ontario Home for Mentally Retarded Infants. This facility is now known as the Plainfield Children's Home and is located in the community of Plainfield, a few miles north of Belleville, Ontario. The objectives of the Velleman Foundation are simple and clear: within the field of mental retardation to support programs and initiatives both of individuals as well as of groups; to extend research and education; and to provide supplementary assistance in special cases.

In 1986-87 an award of $5,000 was made to Dr. Jeanette Holden, Associate Professor in the Department of Biology, Psychiatry and Pediatrics at Queen's University, and Director of the Cytogenetics and DNA Research Laboratory at Ongwanada General Hospital. Dr. Holden is actively involved in a study of some forms of mental retardation, where she examines the chromosomes which are to be found in the nucleus of body cells. Dr. Holden works on the "fragile-X" chromosome which is found in patients with one form of retardation and in members of their families. This work depends upon labelling with radio active markers particular segments of the DNA sequence which makes up a chromosome.

The funds provided by the Velleman Foundation will enable Dr. Holden to install a second shaking water bath — an instrument which ensures that the markers and their targets are constantly agitated at a prescribed temperature. The additional instrument will expand the ability of her laboratory to carry out what is a long-drawn-out and tedious process.

The Ontario Mental Health Foundation
Statement of Financial Activities
Operating Section
For the year ended March 31, 1987

	1987	1986
	$	$
Revenue		
Province of Ontario	**2,765,100**	2,658,800
Investment income	**83,486**	84,660
Donations (note 2)	**118,806**	86,175
	2,967,392	2,829,635
Expenditures		
Awards		
Research grants	**1,816,795**	1,935,841
Major equipment	**90,255**	24,942
Research associateships	**350,525**	292,237
Research scholarships	**203,304**	151,987
Fellowships —		
Long-term	**133,750**	97,651
Research	**162,984**	84,962
Training awards	**46,994**	—
Research studentships	**67,738**	40,699
Clinical research and development scientists	—	992
Educational programs	**(6,107)**	162
	2,866,238	2,629,473
Administration (including fee income of $4,000 (1986 — $6,000) for administration of the COSMOC lottery grants fund and depreciation expense of $2,647 (1986 — $2,941)) (schedule of expenses)	**244,685**	231,952
Committee meetings expenses	**50,882**	53,732
Fund raising expenses	—	9,051
	3,161,805	2,924,208
	(194,413)	(94,573)
Transfer from COMSOC Fund	**61,509**	—
Transfer from Lottery Fund	**145,740**	—
Transfer from Endowment Fund (note 2)	—	78,218
Excess (deficiency) of revenue over expenditures for the year	**12,836**	(16,355)

The Ontario Mental Health Foundation
Statement of Changes in Endowment Fund
For the year ended March 31, 1987

	1987	1986
	$	$
Balance — beginning of year	**1,432,965**	1,376,780
Investment income	**125,352**	134,403
	1,558,317	1,511,183
Transfer to Operating Section (note 2)	—	78,218
Balance — end of year	**1,558,317**	1,432,965

The Ontario Mental Health Foundation
Statement of Changes in M.C.S.S. Lottery Fund — Held in Trust
For the year ended March 31, 1987

	1987	1986
	$	$
Balance — beginning of year (note 5)	—	
Donations for the year	**627,320**	
Investment income	**866**	
Balance — end of year	**628,186**	

The Ontario Mental Health Foundation
Statement of Changes in Lottery Fund
For the year ended March 31, 1987

	1987	1986
	$	$
Balance — beginning of year	**152,531**	177,654
Investment income	**5,257**	14,751
	157,788	192,405
Research grants	**12,048**	39,874
	145,740	152,531
Transfer to Operating Section	**145,740**	—
Balance — end of year	—	152,531

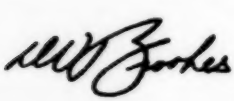
The Ontario Mental Health Foundation
Statement of Changes in COMSOC Lottery Grants Fund
For the year ended March 31, 1987

	1987	1986
	$	$
Balance — beginning of year	**115,368**	159,007
Interest earned	**5,942**	10,208
	121,310	169,215
Research grants	**(2,694)**	32,788
Administration expense	**4,000**	6,000
Publication expense	**58,495**	15,059
	59,801	53,847
Transfer to Operating Section	**61,509**	—
Balance — end of year	—	115,368

The Ontario Mental Health Foundation
Balance Sheet as at March 31, 1987

Assets	1987	1986
	$	$
Operating Section		
Current Assets		
Cash and investments — at cost, which approximates market, plus accrued interest	**680,587**	793,765
Advances to grantees (note 6)	**199,024**	137,708
Unspent awards receivable (note 7)	**26,505**	4,966
Prepaid expenses	**848**	538
	906,964	936,977
Fixed Assets		
Furniture and fixtures — at cost	**57,761**	57,761
Accumulated depreciation	**33,939**	31,292
	23,822	26,469
Total assets — Operating Section	**930,786**	963,446
Endowment Fund		
Cash and investments — at cost, which approximates market, plus accrued interest	**1,558,317**	1,423,853
Due from Operating Section	**—**	9,112
Total assets — Endowment Fund	**1,558,317**	1,432,965
Lottery Fund (note 3)		
Advances to grantees (note 6)	—	12,048
Due from Operating Section	—	149,233
Total assets — Lottery Fund	—	161,281
COMSOC Lottery Grants Funds — Held in Trust (note 4)		
Cash and investments — at cost, which approximates market, plus accrued interest	—	105,429
Unspent awards receivable (note 7)	—	1,763
Due from Operating Section	—	8,176
Total assets — COMSOC Lottery Grants Fund	—	115,368
M.C.S.S. Lottery Fund — Held in Trust (note 5)		
Cash and investments — at cost, which approximates market, plus accrued interest	**628,187**	—
Total assets — M.C.S.S. Lottery Fund	**628,187**	—
Total Assets	**3,117,290**	2,673,060

Signed on behalf of the foundation



Chairman

Vice-Chairman

The Ontario Mental Health Foundation
Balance Sheet as at March 31, 1987

Liabilities and Equity	1987	1986
	$	$
Operating Section		
Current Assets		
Research and equipment grants, fellowships and associateships payable	**297,837**	181,556
Accounts payable and accrued liabilities	**20,617**	15,873
Due to Endowment Fund	**—**	9,112
Due to Lottery Fund	**—**	149,233
Due to COMSOC Lottery Grants Fund	**—**	8,176
	318,454	363,950
Surplus — Operating Section		
Balance — beginning of year	**599,496**	615,851
Excess (deficiency) of revenue over expenditures for the year	**12,836**	(16,355)
Balance — end of year	**612,332**	599,496
Total liabilities and surplus — Operating Section	**930,786**	963,446
Endowment Fund		
Endowment Fund Balance	**1,558,317**	1,432,965
Total liabilities and equity — Endowment Fund	**1,558,317**	1,432,965
Lottery Fund (note 3)		
Awards Payable	**—**	8,750
Lottery Fund Balance	**—**	152,531
Total liabilities and equity — Lottery Fund	**—**	161,281
COMSOC Lottery Grants Fund — Held in Trust (note 4)		
COMSOC Lottery Grants Fund balance	**—**	115,368
Total liabilities and equity — COMSOC Lottery Grants Fund	**—**	115,368
M.C.S.S. Lottery Fund — Held in Trust (note 5)		
M.C.S.S. Lottery Fund balance	**628,187**	—
Total liabilities and equity — M.C.S.S. Lottery Fund	**628,187**	—
Total Liabilities and Equity	**3,117,290**	2,673,060

Auditors' Report to the Members of the Foundation and the Provincial Auditor

We have examined the balance sheet of The Ontario Mental Health Foundation as at March 31, 1987 and the statements of financial activities — operating section, changes in endowment fund, changes in lottery fund, changes in M.C.S.S. fund and changes in COMSOC lottery grants fund for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the Foundation as at March 31, 1987 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Chartered Accountants
June 12, 1987

Toronto,
Ontario

The Ontario Mental Health Foundation
Notes to Financial Statements
For the year ended March 31, 1987

1. Fixed Assets and Depreciation
Fixed assets are recorded at cost less accumulated depreciation. Depreciation is calculated using the declining balance method at an annual rate of 10%.

2. Donations
Donations received by the Foundation are recorded in the Operating Section for use in support of research as directed by the members of the Foundation.

Prior to April 1, 1985, proceeds from donations received during the year, recorded in the Endowment Fund, were transferred to the Operating Section and made available for grants and awards in the following year at the discretion of the Directors. During the year ended March 31, 1986, $78,218 representing donations received was transferred from the Endowment Fund to the Operating Section.

3. Lottery Fund
The lottery fund represents a grant from the Provincial Lottery Awards made to the Foundation through the Ministry of Health, and is designated and fully committed for use to support the Anorexia Nervosa and Enriched Program on Alzheimer's Disease projects.

4. COMSOC Lottery Grants Fund — Held in Trust
The Ministry of Community and Social Services (COMSOC) made funds available in previous years through its Lottery Grants Programme for the support of research related to Childrens' Services and to publish the results of the research. Under this programme, The Ontario Mental Health Foundation continues to administer on-going research projects and all remaining funds will be used to support additional mutually acceptable projects. For this purpose, the remaining unspent funds have been transferred to the Operating Fund in 1987.

5. M.C.S.S. Lottery Fund — Held in Trust
In 1986 the Ministry of Community and Social Services (M.C.S.S.) through an Order-in-Council was awarded an interprovincial lottery allocation for 1986-1987 and beyond. These funds are to be used to support applied research and program evaluation studies related to the mentally, elderly and physically handicapped over a five year period. The Ontario Mental Health Foundation will administer these funds under agreement with the Ministry. In 1987 the initial funds were received by the Foundation and a separate fund has been set up to administer research programs will commence in the forthcoming year.

6. Advances to Grantees
Certain projects are approved for funding for more than one fiscal year. Advances to grantees represent unspent funds from the current year's award which are to be carried forward and added to the following year's award.

7. Unspent Awards Receivable
Unspent awards receivable represent unspent funds at the time a project ends. Grantees are required to return this money to the Foundation.

8. Award Commitments
The Foundation has made commitments of approximately $9,060,115 to fund projects over the next eight years as follows:

	$
1988	3,348,085
1989	2,020,649
1990	1,105,780
1991	808,293
1992	523,959
1993	501,466
1994	427,449
1995	324,434

9. Operating Lease
The minimum annual lease payments under an operating lease expiring on September 1, 1989 are $27,485 for the fiscal years 1988 to 1989, and $11,452 for fiscal 1990.

The Ontario Mental Health Foundation
Schedule of Expenses
For the year ended March 31, 1987

	1987 $	1986 $
Administration		
Salaries	**126,312**	124,530
Foundation's share — employee benefits	**12,582**	11,903
Office supplies and expense	**46,761**	33,096
Rent	**28,823**	28,805
Consultant's fees and expenses	**16,200**	17,900
Audit and legal	**6,590**	6,725
Telephone and telegraph	**4,552**	4,716
Depreciation — office furniture and fixtures	**2,647**	2,941
Sundry	**218**	1,336
	244,685	231,952

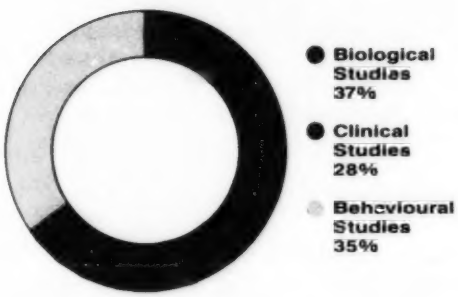
Research Grants and Major Equipment Grants 1986-87

The Foundation received 73 new research grant applications and 10 applications for major equipment. Of this number 29 new grants and 5 major equipment requests were funded for a total of $1,156,920. In addition, 23 ongoing grants in the amount of $839,227. were funded.

The pie chart shown below illustrates the areas of research that were supported.

Research Grants: 1986-87 (Funded)

Clinical investigations:	16	28%
Behavioural investigations:	20	35%
Biological investigations:	21	37%



HAMILTON

Chedoke-McMaster Hospital

Drs. J. Davis and C. Cunningham $40,925.

Social skills training with developmentally handicapped adults.
This investigation is designed to test ways of teaching the mentally handicapped adults skills. Previous studies have suggested techniques which have not turned out well in practice; this investigation builds on the earlier studies and will attempt to enhance patients' skills so that they survive beyond a time of training in an institution so that they can be used in the "real" world.

Hamilton Psychiatric Hospital

Drs. D. MacCrimmon and G. Jones $35,809.

Carbamazepine therapy and procaine activated, computer analysed EEG in treatment resistant schizophrenic psychoses.
Experience shows that some schizophrenic patients who are resistant to the usual treatments respond to an anti-epileptic drug. This study aims to identify patients likely to benefit from the use of anti-epileptic drugs.

McMaster University, Hamilton

Dr. P. Chang $55,467.

Pseudosulfatase deficiency — molecular explanation for its escape from neurodegeneration.
An enzyme deficiency, known to be associated with a degenerative disease of the nervous system has been found in both patients and in normal individuals. Dr. Chang is attempting to find out what it is that protects the normal person from developing the disease usually caused by the enzyme deficiency.

Dr. D. Elliott $4,500.

Cerebral asymmetry and information processing deficits in Down's Syndrome adolescents and young adults.
Down's Syndrome produces mental retardation. Dr. Elliott is trying to find out which tasks the two halves of the brain perform most efficiently in Down's patients; this research is necessary to develop ways to remedy the difficulties which Down's patients encounter.

Dr. B Levy **$36,099.**

Diagnosing and remediating processing skills related to reading failure.
This investigation aims to pick up, earlier than is now done, children who have difficulty in learning to read; once these children have been detected special classes to remedy the deficiency can be put in hand. Dr. Levy has shown that such children can be reliably detected in grades 3 to 6 and that children who have difficulty reading vary so much that an individual profile of the difficulties each encounters should be made.

Dr. R. Mishra **$34,528.**

Studies on the modulatory effect of hypothalamic factor L-Prolyl-L-Leucyl-Glycinamide on biogenicamine receptors.
Dr. Mishra is investigating the mode of action of a naturally occurring chemical substance which may help to prevent tardive dyskinesia and relapse in schizophrenia. Tardive dyskinesia is a damaging side-effect of prolonged use of anti-psychotic drugs; research aimed at reducing this side-effect may have important implications for the treatment of patients with psychoses.

Dr. L. Niles **$39,454.**

Brain target sites for melatonin: modulation of cyclic nucleotide synthesis and GABAergic function.
Dr. Niles is attempting to find out where in the brain a hormone — melatonin — excreted by the pineal gland is active. The hormone is thought to be important in the causation of the affective disorders.

Drs. D. Streiner and H. Miller **$26,515.**

Multitrait-multimethod investigation of psychiatric diagnosis.
Many tests have been devised to aid the diagnosis of psychiatric patients. In this investigation several different tests will be compared to find out the extent of agreement between them: the long-term aim is to establish which instruments are reliable and valid.

St. Joseph's Hospital, Hamilton

Dr. P. Links, et al **$33,659.**

Prospective follow-up study of subgroups of borderline patients.
This study is an attempt to examine the data used to make prognoses for the patients diagnosed as "borderline". At present the prognosis which follows from the diagnosis is uncertain so Dr. Links is testing the individual symptoms which enter into the diagnosis to show how each is related to the outcome of the illness.

Drs. M. Steiner and E. Werstiuk **$33,489.**

How does electroconvulsive therapy (ECT) work?
Electroconvulsive therapy is used to treat depressive patients. Although it is an effective treatment for some patients how it works is unknown. This investigation is designed to study one of the major hypotheses which has been put forward as a possible explanation of how this treatment works.

KINGSTON

Kingston Psychiatric Hospital

Dr. S. Southmayd, et al **$41,532.**

The effects of daytime sleep on noctural sleep disturbance in depression (including a major equipment grant).
Depression is a disease marked by a disorder of the sleep-wake cycle. It is not known to what extent the night-time sleep disorder, which has been studied in detail, is associated with day-time sleeping. This investigation aims to record sleep round the clock so that this question can be answered.

Queen's University, Kingston

Drs. J. Holden and B. White **$58,965.**

Identification of DNA markers closely linked to the mutation causing the fragile X syndrome (including a major equipment grant).
One type of mental retardation is now thought to be due to a genetic mutation called the "Fragile-X" chromosome. The aim of this investigation is to find markers which will identify those individuals who carry the chromosome. A marker permits genetic counsellors to inform people about the likelihood of their having mentally retarded children.

Dr. K. Jhamandas, et al **$58,380.**

Pharmacologic protection and reversal of cortical cholinergic deficit induced by endogenous neurotoxin quinolonic acid.
One of the explanations advanced for Alzheimer's disease is a degeneration found in the forebrain and the cerebral cortex; some substances produce this degeneration and other substances protect the brain. This investigation is designed to find out more about the action of the chemicals which both produce the effect and diminish it with the object of understanding the physiological changes that underly the dementia seen in Alzheimer's disease.

LONDON

University Hospital, London

Drs. R. Glueckauf and A. Quittner **$17,130.**

The effects of social support and personality variables on maternal adaptation to the stress of a hearing impaired child.
A deaf child can be a major source of stress to the family. This investigation is concerned with the influence which the mother's personality has in regulating the impact of a deaf child in the family as part of an endeavour to find out the critical factors which enable families to adjust to a deaf child.

Dr. J. McGlone **$48,973.**

Early diagnosis of dementia of the Alzheimer type.
Dr. McGlone is attempting to devise a means which will enable one to diagnose at an early stage the dementia which is a feature of Alzheimer's disease. This illness, in the early stages, may be confused with other psychiatric disorders.

University of Western Ontario, London

Dr. C. Gibson **$41,961.**

Noradrenergic systems in aging and dementia.
One portion of the brain the locus coeruleus, influences locomotion, learning, memory, mood and sleep. A study of biochemistry and cell structure in the locus coeruleus will be made on brain tissue from Alzheimer patients.

Dr. I. Gotlib **$43,607.**

Depression and family interaction: the effects of maternal depression on children.
When a family includes a member who has a serious psychiatric disorder one question which naturally arises is: Does the presence of the disordered member lead to psychiatric disorders in other members of the family? Dr. Gotlib is examining the effects of depression in a mother upon the children in a family.

Drs. R. Rylett and H. Colhoun **$36,662.**

Studies on cholinergic hypofunction induced in rats by choline mustard: a possible animal model for Alzheimer's disease.
Research into human diseases is aided if there is an animal "model" for the illness. This investigation examines an animal model for Alzheimer's disease; the aim is to produce changes in the brain of a rat which mimic some of the changes that are found in the brains of patients who had Alzheimer's disease.

OTTAWA

Carleton University, Ottawa

Dr. H. Anisman **$33,660.**

Sensitization of catecholaminergic mechanisms by early life trauma: implications for behavioural disturbances in adulthood.
Dr. Anisman is conducting an investigation to find out if stress in early life produces "depression" in an animal model. Animals exposed to early stress may be liable to depression because the early experience alters brain chemistry.

Ottawa General Hospital

Drs. R. Pivik and Y. Lapierre **$51,298.**

Concordance among biological markers for schizophrenia (including a major equipment grant).
Schizophrenia is a disorder which is sometimes difficult to diagnose. Dr. Pivik is investigating ways to make diagnosis more certain by using behavioural and biological "markers". The use of such markers would be akin to the use of laboratory tests in diagnosis.

Dr. D. Stuss, et al **$29,146.**

Attentional disorders in closed head injury.
Closed head injury, often the result of accident, is a major public health problem. This investigation is designed to find out what changes take place in the ability of people who have had such injuries to process information — an ability they need in order to respond effectively to the events of ordinary life.

University of Ottawa

Drs. P. Hrdina and Y. Lapierre **$45,334.**

^{3}H imipramine sites in brain and platelets: role in affective disorders and in mode of action of antidepressants.
Dr. Hrdina and Dr. Lapierre are examining in the brain and in blood cells "receptor sites" for drugs used in the treatment of depression. Understanding how the drugs work involves a better understanding of the mode of action of the receptor sites.

Dr. I. Mazurkiewicz-Kwilecki **$38,433.**

Brain histamine in aging.
Dr. Mazurkiewicz-Kwilecki is examining the brain activity of histamine. This substance is thought to be a "neurotransmitter"; she is examining how this chemical alters its activity in the aging brain.

Dr. D. Peters **$59,915.**

Effect of prenatal stress on brain development (including a major equipment grant).
This grant supports the latest stage of continuing investigation to find out what are the effects of prenatal stress upon the development of adults. The object is to find out if stress applied to pregnant animals leads to a different sort of brain chemistry in the offspring which influences their subsequent development.

PENETANGUISHENE

Mental Health Centre, Oak Ridge Division

Drs. G. Harris and M. Rice **$27,900.**

Psychopathy and treatment efficacy in a maximum security therapeutic community: a follow-up study.
Psychopathic patients who are the object of criminal prosecution have acquired a reputation of being untreatable; few studies have been conducted to find out what the effects of treatment in this group may be. This study is a retrospective investigation of individuals who were diagnosed as psychopaths and treated while they were in prison. The results will have implication for the debate about recedivism in prisoners.

TORONTO

Canadian Brain Tissue Bank

Dr. T. Morley **$50,000.**

The study of brain tissue, collected from patients who have had during life a psychotic or organic disease, is important to establishing the physiological basis of mental disease. The Canadian Brain Tissue Bank is an important source of tissue for researchers across Canada.

Clarke Institute of Psychiatry

Drs. B. Martin and A. Peter **$17,870.**

ECT and Schizophrenia: an examination of indications and dosage.
The use of ECT in the treatment of schizophrenia is still an unsettled issue. This study aims to find out if those schizophrenics who respond most favorably to ECT are those who have an emotional disturbance. If this turns out to be the case then the prescription of the treatment should be made on the basis of individual symptoms rather than on the basis of an overall diagnosis.

C.M. Hincks Treatment Centre

Dr. P. Marton, et al **$40,431.**

A controlled investigation of the relationship between affective disorder and personality disorder in adolescents.
Dr. Marton and his colleagues are investigating the relationships between disorders of mood and personality in adolescents. One of the questions addressed in this study is the extent to which disorder in adolescents is a sign that there will be a psychiatric illness in the same individual as an adult.

Hospital for Sick Children

Dr. J. Callahan **$25,000.**

Peroxisomes and disease.
In some diseases, seen in children, there is a disorder of enzymes found in patients' cells. The precise nature of the chemical disorder is not known; this investigation is directed at establishing the chemical events which cause the disorder by examining cells taken from patients who have these diseases.

Dr. M. Dennis **$20,808.**

Early brain damage and later intelligence.
Dr. Dennis is investigating the connexions between damage to the brain in early life and the development of intelligence in later life by studying the growth and development of children who were injured in early life.

Dr. M. Dennis **$26,809.**

Early brain damage and later cognitive functions.
Dr. Dennis is examining the connexion between early brain damage and communication skills in individuals who have been damaged in early life. She is also looking at the relationship between these communication skills and cognitive development.

Dr. S. Goldberg, et al **$35,354.**

Maternal communication style with delayed preschoolers.
Almost all children who have a developmental delay have a language disorder. This is often treated by attempting to alter the way the mother communicates with the child. Little is known about how one can influence maternal styles of communication; this study is an attempt to find out how mothers communicate with their children.

Drs. S. Goldberg and R. Simmons **$36,066.**

Impact of a chronic illness in an infant on the infant-mother interaction.
This investigation is designed to find out about the impact of chronic illness upon the development of infants; especial attention is being paid to the quality of the mother-infant relationship. Current knowledge would lead one to suppose that the attachment of the child to the mother will be less secure if there has been a chronic illness; the investigation is designed to find out if this is true.

Dr. M. Lovett **$60,941.**

Parameters of treatment — specific and generalized treatment effects in dyslexic children's response to remediation.
Dr. Lovett is trying to find out what constitutes an effective treatment for specific reading disability. Dr. Lovett is examining the factors which influence treatment changes in two different kinds of remedial teaching for children with specific dyslexia.

Drs. C. Netley and J. Rovet **$42,218.**

Cognition, personality and their biosocial determinants.
Dr. Netley and his colleagues are concerned with individuals who have an unusual chromosome complement. Other investigators have looked at the medical and physical consequences of chromosome abnormalities; Dr. Netley is examining the influence of the abnormalities upon cognitive powers and personality.

Dr. R. Schachar **$35,457.**

Studies of attention in children with attention deficit disorders and hyperactivity.
Hyperactive children, with attention deficit disorder, are troubled by an inability to pay proper heed to what is happening around them. Many features of this deficit are puzzling; this investigation is designed to find out more precisely why it is that these children find it difficult to control their reactions to the stimuli which demand responses from them.

Dr. R. Schachar **$19,916.**

The effect of methylphenidate on behavior and attention.
The treatment of hyperactive children by methylphenidate causes concern; the prognosis for treated children is not more favourable than for children who do not get treated — even though there are short term beneficial effects. This investigation is designed to find out more about the ways in which this drug acts and will try to find out why there is no long-term improvement.

Mount Sinai Hospital

Dr. M. Freedman **$38,412.**

Comparative neuropsychology, dementia and depression.
In elderly patients it may be difficult to tell the difference between depression and dementia. Dr. Freedman has planned an investigation which will attempt to identify more clearly the two different kinds of disorder with the aim of making it possible to diagnose elderly patients more accurately. In addition he wishes to examine the anatomical basis for symptoms in patients in whom the disorder is clearly defined.

Queen Street Mental Health Centre

Dr. K. Boydell, et al **$53,250.**

The chronic schizophrenic in the community; a socio-epidemiologic study using survival analysis.
This investigation will follow patients discharged from a Provincial psychiatric hospital in an endeavour to discover the role which factors, such as housing, social support and clinical state, play in governing continuing remission, or relapse and a subsequent return to hospital.

Surrey Place Centre

Dr. M. Feldman **$50,000.**

Evaluation of a parent education program for low-IQ parents and their children.
It is likely that, in future, children who are mentally retarded will be reared more often by their families. Services are provided to the families of these children; yet they are still at risk for neglect and maltreatment. This study is designed to investigate the prophylactic effect of providing an additional educational package for parents of mentally retarded children who are undertaking to care for their own offspring at home. (This project was jointly funded by the Ontario Mental Health Foundation and the Ministry of Community and Social Services.)

Dr. M. Percy, et al **$43,967.**

Risk factors in Alzheimer's disease.
Dr. Percy has been investigating Alzheimer's disease as it occurs in patients with Down's Syndrome. She is developing techniques for distinguishing between those patients who develop the further disorder in addition to the mental retardation.

Dr. B. Scott **$30,000.**

Effect of aging on neuronal electric membrane properties (including a major equipment grant).
The operations of the brain change as brain cells grow older. The physiological basis for these changes is not known. This investigation will attempt to test some of the leading hypotheses which have been put forward to account for aging in brain cells.

Dr. B. Scott, et al **$35,000.**

Neurobiological investigations of Down's syndrome and mouse trisomy 16.
The changes which take place in the brain cells of patients with Down's syndrome are not clearly understood. This investigation is designed to find out more about the disorders of cell physiology which affects the brains of patients with this disorder.

Toronto General Hospital

Dr. L. Becker **$31,868.**

Neuronal development in Down's syndrome, from early gestation to old age.
This investigation is designed to find out more about the development of cells in the human brain in patients who have Down's syndrome; it is known that the cells of Down's patients do not develop normally but it is not clear how this failure begins and at what ages it first manifests itself.

Dr. P. Garfinkel, et al **$34,842.**

Anorexia nervosa: factors related to its diagnosis and outcome.
Anorexia nervosa is a condition most commonly found amongst young women. Dr. Garfinkel is investigating the factors which predispose individuals to this illness and ways in which it may be treated. He is examining the prevalence of the condition overseas and in Canada to assess social factors in this disease.

Dr. G. Rodin **$28,560.**

The psychosocial consequences of cadaveric renal transplantation.
Dr. Rodin is examining the psychological consequences for patients who choose different forms of medical treatment. He has chosen as a topic for investigating the psychological outcomes of patients who have a potentially fatal kidney disease and who have the alternatives of dialysis or transplantation as the methods of treatment.

Toronto Western Hospital

Dr. P. Carlen **$40,976.**

Altered sedative-hypnotic drug responses and excitable membrane properties of neurons from old compared to younger mature rats.
As patients become older the efficacy of drugs alters. This study examines the effects of sedative and hypnotic drugs on older and younger neurons grown in a laboratory.

University of Toronto

Dr. D. Crapper-McLachlan, et al **$50,000.**

Gene expression in senile and presenile dementia of Alzheimer type.
This investigation uses recombinant DNA technology to examine the way genes express themselves in individuals suffering from Alzheimer's disease. An alteration in gene expression is thought to lead to reduced protein synthesis and as a final result, to an alteration in the function and survival of brain cells.

Dr. C. Leprohon **$43,097.**

The effect of methionine administration to rats on brain dopamine function.
Dr. Leprohon is examining chemicals which act to influence the activity of an important neurotransmitter: dopamine. Dopamine is thought to be active in a number of neurological and psychiatric diseases.

Dr. P. Seeman **$47,250.**

Dopamine receptors in post-mortem schizophrenia tissues.
A leading theory put forward to explain schizophrenia is that patients have an abnormality in the activity of one neurotransmitter — dopamine. This study attempts to examine the hypothesis by examination of patients' brains post mortem.

Dr. P. Seeman **$58,350.**

Purification of brain dopamine receptors.
A leading hypothesis to account for schizophrenia is that there is an alteration in the way the brain cells of patients react to a neurotransmitter chemical: dopamine. This investigation is designed to find out more about the dopamine receptor with the aim of discovering how it operates in schizophrenia.

WATERLOO

University of Waterloo

Dr. K. Rubin **$26,364.**

Peer pairing as a means to ameliorate social withdrawal in childhood.
In some children isolation during childhood is a sign that foretells later problems of development. Dr. Rubin is attempting to find out if pathological development can be forestalled by deliberately forming pairs of children.

Individual Awards 1986-87

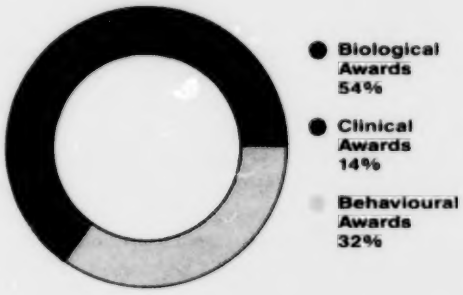
In 1986-87, 37 Individual Award Applications were received. Of this number 17 were supported for a total of $346,928.

In addition, the Foundation supported 18 ongoing Individual Awards in the amount of $602,537.

The pie chart shown below illustrates the areas of research that were supported.

Individual Awards: 1986-87 (Funded)

Clinical investigations:	5	14%
Behavioural investigations:	11	32%
Biological investigations:	19	54%



HAMILTON

McMaster University, Hamilton

Research Associates
Dr. G. Brown
Dr. D. Campbell
Dr. H. Szechtman

Research Scholars
Dr. P. Chang
Dr. R. Mishra
Dr. M. Pisa

Long-Term Research Fellows
Dr. E. Grof
Dr. L. Niles
Dr. E. Werstiuk

Research Fellow
Dr. L. Archer

Research Student
Mr. G. Ross

Conference Program
Dr. G. Bartolucci

KINGSTON

Queen's University, Kingston

Training Award
Dr. R. Boegman

Research Student
Mr. D. Clow

LONDON

University of Western Ontario, London

Research Scholar
Dr. C. Gibson

OTTAWA

Carleton University

Research Fellow
Dr. P. Ahluwalia

University of Ottawa

Research Associate
Dr. R. Pivik

Long-Term Fellow
Dr. D. Clapin

Research Student
Ms. L. Mercier

TORONTO

Baycrest Hospital, Toronto

Research Fellow
Dr. L. Alcorn

Clarke Institute of Psychiatry, Toronto

Research Fellow
D. P. Li

Training Awards
Dr. J. Eisen
Dr. P. Schmidt

Hospital for Sick Children, Toronto

Research Associate
Dr. M. Dennis

Research Scholar
Dr. M. Lovett

Research Fellow
Dr. S. MacKay-Soroka

St. Michael's Hospital

Research Fellow
Dr. R. Styra

Toronto General Hospital

Research Associate
Dr. D. Garner

Long-Term Fellow
Dr. C. Littlefield

Research Fellow
Dr. R. Davis

University of Toronto

Research Associates
Dr. U. DeBoni
Dr. M. Moscovitch

Research Students
Ms. N. Bzowej
Mr. J. Francis
Mr. D. Grigoriadis

Advisory Board

C. Buck, M.D.
(Acting Chairman), London

P. Cooper, M.D.
London

A. Hahn, M.D.
London

F. Letemendia, M.D.
Kingston

A. MacLean, Ph.D.
Kingston

D. MacCrimmon, M.D.
Hamilton

G. Rodin, M.D.
Toronto

Research Committee

P. Cooper, M.D. (Chairman)
London

R. Capek, M.D.
Montreal

P. Chang, Ph.D.
Hamilton

S. Goldberg, Ph.D.
Toronto

L. Hutchinson, M.D.
Thunder Bay

P. Leichner, M.D.
Verdun, P.Q.

J. Leverette, M.D.
Kingston

J. McGlone, Ph.D.
London

D. Peters, Ph.D.
Ottawa

M. Rivard, M.D.
Ottawa

S. Segalowitz, Ph.D.
St. Catharines

S. Young, Ph.D.
Montreal

Fellowships Committee

A. MacLean, Ph.D.
Kingston

J. Cleghorn, M.D.
Hamilton

C. Cunningham, Ph.D.
Hamilton

C. Gibson, Ph.D.
London

B. Madras, Ph.D.
Massachusetts

J. McClure, M.D.
Vancouver

N. Nair, M.B.
Montreal

R.T. Pivik, Ph.D.
Ottawa

W.G. Sherwood, M.B.
Toronto

Major Donors from April 1, 1986 to March 31, 1987

Birkett, Dr. C.W.
Black, Paul
Bristol Myers
Broadhurst, W.H.
Canadian Imperial Bank
Canadian Tire Corporation
Col. Sanders Charitable Org.
Confederation Life Insurance Co.
Dofasco Inc.
Dominion Securities Inc.
Domtar Inc.
Doric Developments Limited
Empire Life Insurance
Fleming, W.
Freedman, S.
Hennessy, Dr. A.
Imasco
International Pipeline
Lush, Peter G. & Associates
Magna Securities
Molson Companies
Donations Fund
Nesbitt Thomson
Norcen Energy Resources Ltd.
Royal Bank of Canada
Royal Trust Corporation
Southam Inc.
Squibb, Geoffrey Wayne
Texaco
3M Canada Inc.
Toronto Dominion Bank
TransCanada Pipelines
Upjohn Company of Canada

The Ontario Mental Health Foundation is a charitable Foundation, Registration No. 0370494-11-13. Donations to further research into the causes of mental illness, and for the development of improved treatments are needed, and may be sent to:

Ontario Mental Health
Foundation
365 Bloor Street East
Suite 1708
Toronto, Ontario
M4W 3L4

Receipts will be issued for income tax purposes.